AMENDMENTS TO THE CLAIMS

Claims 1-35 (Canceled)

36. (Currently Amended) A system for ablating an interior tissue region of an organ or duct within a body of a patient comprising:

an ablation tool including an elongated antenna device electrically coupled to a coaxial transmission line that is electrically coupled to a source of microwave energy for delivering sufficient microwave energy to the antenna device to effect ablation of a tissue region within the interior of the organ or duct, the coaxial transmission line including an inner conductor, an outer conductor and a dielectric medium disposed between the inner and outer conductors, the antenna device including an antenna that is coupled to a distal end of the inner conductor of the coaxial transmission line and an enclosure that encapsulates the antenna with a dielectric material; and

an introducer <u>that is not connected to the source of microwave energy, said introducer</u> having a proximal end, a sharpened distal end for penetrating through a wall of the organ or duct, and a lumen which is sized and dimensioned for slidable movement of the antenna device therein, the antenna device being configured to be deployed into the interior of the organ or duct through the sharpened distal end of the introducer with a deployed shape that is substantially straight and at a skewed angular orientation relative to a longitudinal axis of the introducer, to orient the antenna device in a direction towards and substantially parallel to an interior portion of the penetrated wall for producing a linear lesion at the tissue region of the penetrated wall which is targeted for ablation.

37. (Allowed) A system for ablating an interior tissue region of an organ or duct within a body of a patient comprising:

an ablation tool including an elongated antenna device electrically coupled to a coaxial transmission line that is electrically coupled to a source of microwave energy, the coaxial transmission line delivering microwave energy to the antenna device so as to effect ablation of a tissue region within the interior of the organ or duct, the coaxial transmission line including an inner conductor, an outer conductor and a dielectric medium disposed between the inner and outer conductors, the antenna device including an antenna that is coupled to a distal end of the inner conductor of the coaxial transmission line and an enclosure that encapsulates the antenna with a dielectric material; and

an introducer configured to carry at least a portion of the ablation tool, the introducer having a proximal end, a sharpened distal end for penetrating through a wall of the organ or duct, and at least one lumen which is sized and dimensioned for slidable receipt of at least the antenna device of the ablation tool therethrough, the antenna device being configured to be deployed into the interior of the organ or duct through the sharpened distal end of the introducer, wherein upon deployment the antenna device assumes a predetermined position in a direction towards the tissue region targeted for ablation and substantially parallel to the tissue region targeted for ablation, wherein said ablation tool comprises a steering mechanism associated with the proximal end of the tool which, upon manipulation, is configured to cause at least a portion of the antenna device to assume an angular orientation relative to a longitudinal axis of the tool.

38. (Allowed) The system of claim 37 wherein said angular orientation is between about 0 and 90 degrees relative to the longitudinal axis of the tool.

39. (Allowed) The system of claim 37 wherein said angular orientation is between about 45 and 135 degrees relative to the longitudinal axis of the tool.

Claims 40-47. (Canceled)

48. (Withdrawn) The system of claim 36 wherein said ablation device is a radiofrequency probe.

49. (Withdrawn) The system of claim 36 wherein said ablation device is a laser probe.

50. (Withdrawn) The system of claim 36 wherein said ablation device is a cryosurgical probe.

51. (Canceled)

52. (Withdrawn) The system of claim 47 wherein the ablation device further comprises a microwave antenna which is electrically coupled to a transmission line, and a ground plane electrically coupled to the transmission line and positioned proximally to the antenna, wherein said ground plane is configured to couple electromagnetic energy between the antenna and the transmission line.

53. (Canceled)

54. (Withdrawn) The system of claim 36 wherein said distal end of the introducer is preshaped to extend at an angle relative to a longitudinal axis of the introducer.

55. (Withdrawn) The system of claim 54 wherein said distal end of the introducer extends at an angle of between about 0 and 90 degrees relative to the longitudinal axis of the introducer.

56. (Withdrawn) The system of claim 54 wherein said distal end of the introducer extends at an angle of between about 45 and 135 degrees relative to the longitudinal axis of the introducer.

57. (Currently Amended) A microwave ablation device for ablating an interior portion of a wall of a beating heart, the microwave ablation device comprising:

a probe configured to penetrate the wall of the beating heart, the probe having a proximal end portion and a distal end portion having a sharpened distal end and wherein said probe is not configured to deliver ablation energy; and

a microwave energy delivery portion slidably disposed within the distal end portion of the probe, said sharpened distal end of said probe being configured to penetrate the wall of the beating heart to facilitate deployment from the distal end within an interior cavity of the beating heart of the microwave energy portion configured substantially to match the shape of the interior portion of the wall for linearly ablating the interior portion of the wall of the beating heart proximate the deployed microwave energy delivery portion.

58. (Withdrawn) The device of claim 57 wherein said energy delivery portion comprises a microwave antenna which is located within said distal end portion of the shaft.

59. (Withdrawn) The device of claim 57 wherein said energy delivery portion includes a needle microwave antenna.

60. (Withdrawn) The device of claim 59 wherein an outer diameter of the needle antenna is less than about 3 mm.

61. (Withdrawn) The device of claim 57 wherein said distal end portion of the device is preshaped to extend at an angle relative to a longitudinal axis of the shaft.

62. (Withdrawn) The device of claim 61 wherein said distal end portion extends at an angle of between about 0 and 90 degrees relative to the longitudinal axis of the shaft.

63. (Withdrawn) The device of claim 61 wherein said distal end portion extends at an angle of between about 45 and 135 degrees relative to the longitudinal axis of the shaft.

64. (Withdrawn) The device of claim 57 wherein said distal end portion comprises a dielectric material which substantially surrounds the distal end portion.

65. (Withdrawn) The device of claim 57 wherein a thickness of the dielectric material varies along a length of the distal end potion of the device.

66. (Canceled)

67. (Canceled)

68. (Withdrawn) The device of claim 57 further comprising a conductive element which is coupled to the shaft at a spaced apart location form the energy delivery portion and which is configured to be positioned in at least close proximity to an outer wall of the organ or duct when the energy delivery portion is positioned inside the organ or duct.

69. (Withdrawn) The device of claim 68 wherein the conductive element comprises a metallic strip.

70. (Withdrawn) The device of claim 69 wherein the metallic strip is spaced-apart from the energy delivery portion at a distance of between about 1 to 15 mm.

71. (Withdrawn) The device of claim 60 wherein the metallic strip is formed form a metallic

foil.

72. (Withdrawn) The device of claim 68 wherein the conductive element comprises a metallic wire.

73. (Withdrawn) The device of claim 72 wherein the metallic wire is formed from silver.

74. (Withdrawn) The device of claim 68 wherein the conductive element extends at an angle relative to a longitudinal axis of the shaft of the device.

75. (Withdrawn) The device of claim 68 wherein the conductive element is arranged to attract an electric field generated by the energy delivery portion to provide a sufficiently high electric field proximate the energy delivery portion which is sufficient to effect ablation of tissue.

76. (Canceled)

77. (Canceled)

78. (Currently Amended) An ablation device for ablating heart tissue, the device comprising:

an elongated shaft that is not connected to a source of ablation energy, said elongated shaft having a proximal end portion and ~~,~~ a sharpened distal end~~,~~; and

a pre-shaped elongated energy delivery portion slidably disposed within the elongated shaft proximate to the distal end, said energy delivery portion including a shape memory material that facilitates bending following deployment of the energy delivery portion from the distal end and that facilitates straightening in response to retraction of the energy delivery portion relative to the distal end of the elongated shaft, the deployed shape of the elongated energy portion having a contour of an inner wall of a heart to substantially conform the elongated energy delivery portion to the inner wall of the heart with the distal end of the elongated shaft penetrating through the inner wall of the heart.

Claims 79-81 (Canceled)

82. (Previously Presented) The device of claim 78 wherein said elongated energy delivery

portion is pre-shaped to extend substantially straight from the distal end at a skewed angle relative to a longitudinal axis of the shaft.

83. (Previously Presented) The device of claim 82 wherein said energy delivery portion extends at an angle greater than 0 and less than 90 degrees relative to the longitudinal axis of the shaft.

84. (Currently Amended) The device of claim 82 wherein said energy delivery portion extends at an angle of between about 45 and 135 degrees relative to the longitudinal axis of the shaft.

Claims 85-86. (Canceled)

87. (Withdrawn) The device of claim 78 wherein the energy delivery portion has a sharpened distal end which is configured to penetrate through a wall of an organ or duct.

88. (Canceled)

89. (Previously Presented) The device of claim 78 wherein the energy delivery portion is configured to substantially conform to a tissue region of the inner wall surrounding a pulmonary vein.

90. (Previously Presented) The device of claim 78 wherein the energy delivery portion is configured to substantially conform to at least a portion of a lateral inner wall of the right atrium.

91. (Canceled)

92. (Withdrawn) The device of claim 78 further comprising a conductive element which is coupled to the shaft at a spaced apart location form the energy delivery portion and which is configured to be positioned in at least close proximity to an outer wall of the organ or duct when the energy delivery portion is positioned inside the organ or duct.

93. (Withdrawn) The device of claim 92 wherein the conductive element comprises a metallic strip.

94. (Withdrawn) The device of claim 93 wherein the metallic strip is spaced-apart from the energy delivery portion at a distance of between about 1 to 15 mm.

95. (Withdrawn) The device of claim 93 wherein the metallic strip is formed form a metallic foil.

96. (Withdrawn) The device of claim 92 wherein the conductive element comprises a metallic wire.

97. (Withdrawn) The device of claim 96 wherein the metallic wires is formed from silver.

98. (Withdrawn) The device of claim 92 wherein the conductive element extends at an angle relative to a longitudinal axis of the shaft of the device.

99. (Withdrawn) The device of claim 92 wherein the conductive element is arranged to attract an electric field generated by the energy delivery portion to provide a sufficiently high electric field proximate the energy delivery portion which is sufficient to effect ablation of tissue.

100. (Currently Amended) An ablation assembly, comprising:

a probe having a sharpened distal end configured for percutaneously penetrating through a wall of an organ for introducing a longitudinal energy delivery member into a cavity within the organ, the longitudinal energy delivery member being deployable form the distal end of the probe within the cavity of the organ, and being configured to conform to an inner wall of the organ for producing a substantially linear lesion on the inner wall of the organ in response to ablative energy delivered to the longitudinal energy delivery member, and wherein the probe is not configured to deliver ablative energy.

101. (Currently Amended) The ablation assembly as recited in claim 100 in which the longitudinal energy delivery member is deployable from the distal end at an angular position relative to an elongated axis of the probe near the distal end thereof that places the longitudinal energy delivery member substantially parallel to the inner wall of the organ with each longitudinal portion of the longitudinal energy ~~deliver~~ delivery member equidistant from the inner wall of the organ.

Claims 102-104 (Canceled)

105. (Previously Presented) The ablation device as recited in claim 78 wherein the energy delivery portion is configured to produce an electromagnetic field that is concentrated on a side of the energy delivery portion oriented proximate to the inner wall of the heart in order to produce a linear lesion at the inner wall of the heart.

Claims 106-110. (Canceled)

111. (New) The ablation device of claim 78, further comprising an antenna enclosure encapsulating at least a portion of said pre-shaped elongated energy delivery portion.

112. (New) The ablation device of claim 111, wherein said antenna enclosure comprises a dielectric material.

113. (New) An ablation system for ablating an interior tissue region of an organ or duct within a body of a patient, said system comprising:

a probe configured to penetrate a wall of the organ or duct, but not to deliver ablation energy, the probe having a proximal end portion and a distal end portion having a sharpened distal end; and

an ablation tool configured to be slidably passed within said probe, said ablation tool comprising an ablation element at a distal end thereof and an ablation energy supply line connected proximally to said ablation element, said ablation element having a first, substantially straight configuration assumed when being passed through said probe, and a second, bent configuration assumed when said ablation element extends distally from said distal end of said probe.

114. (New) The ablation system of claim 113, wherein said ablation element, in said bent configuration, comprises two straight portions interconnected by an angled portion.

115. (New) The ablation system of claim 113, wherein said ablation element comprises a microwave antenna.

116. (New) The ablation system of claim 113, wherein said probe and said ablation tool are

independent components and wherein said ablation tool can be completely removed from within said probe.

117. (New) The ablation system of claim 113, wherein said ablation tool and probe are integrally provided within said system.

118. (New) The ablation system of claim 117, further comprising a handle proximally connected to said probe, and wherein longitudinal sliding of said ablation tool within said probe is facilitated via said handle.

119. (New) The ablation system of claim 113, further comprising a biasing member configured to bias said ablation element from said substantially straight configuration to said bent configuration.